

Research Seminar on the Carbon budget of the Finnish Forests 1920 - 2000 - Opening

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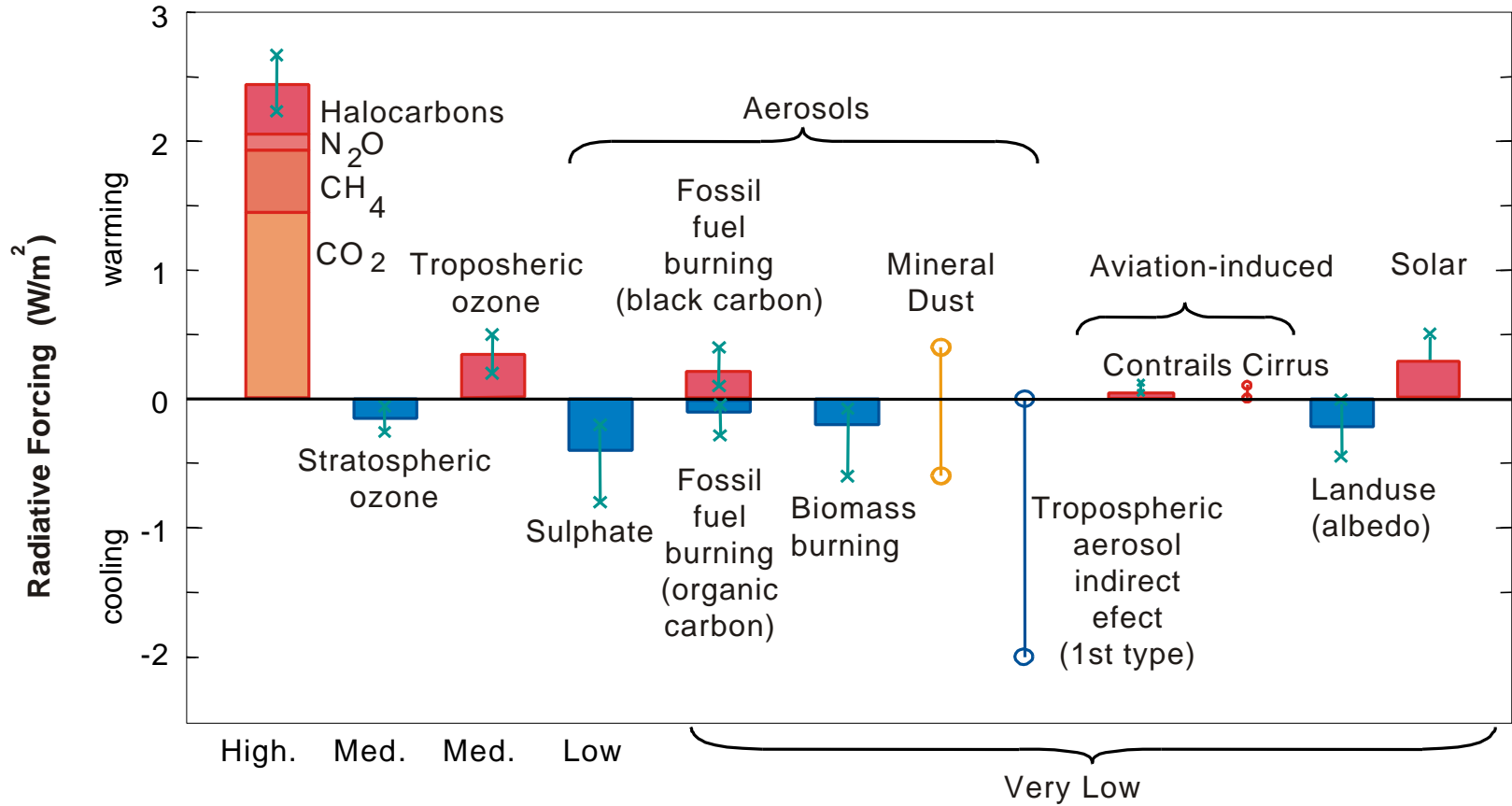
Research Professor

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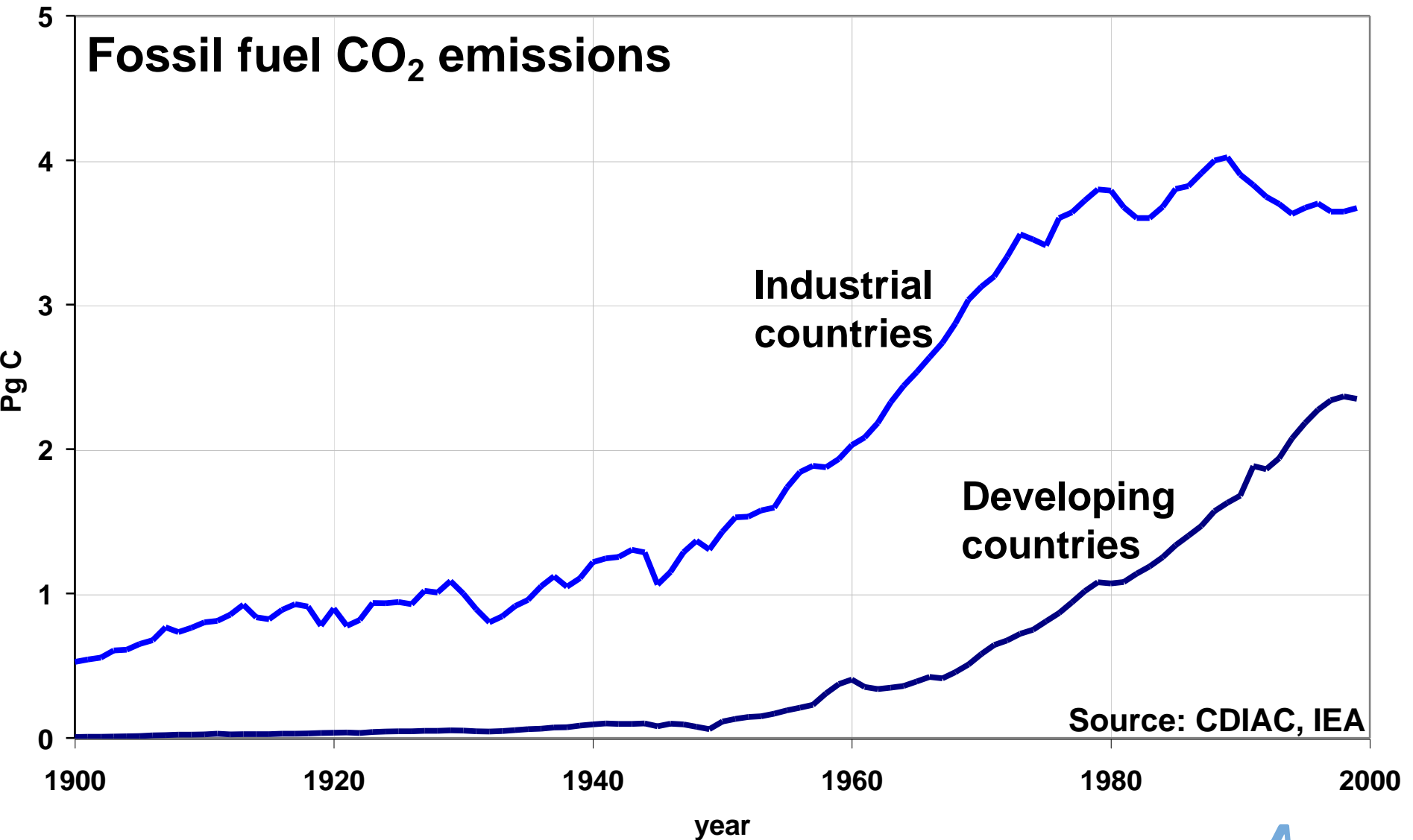
March 23, 2004, Helsinki

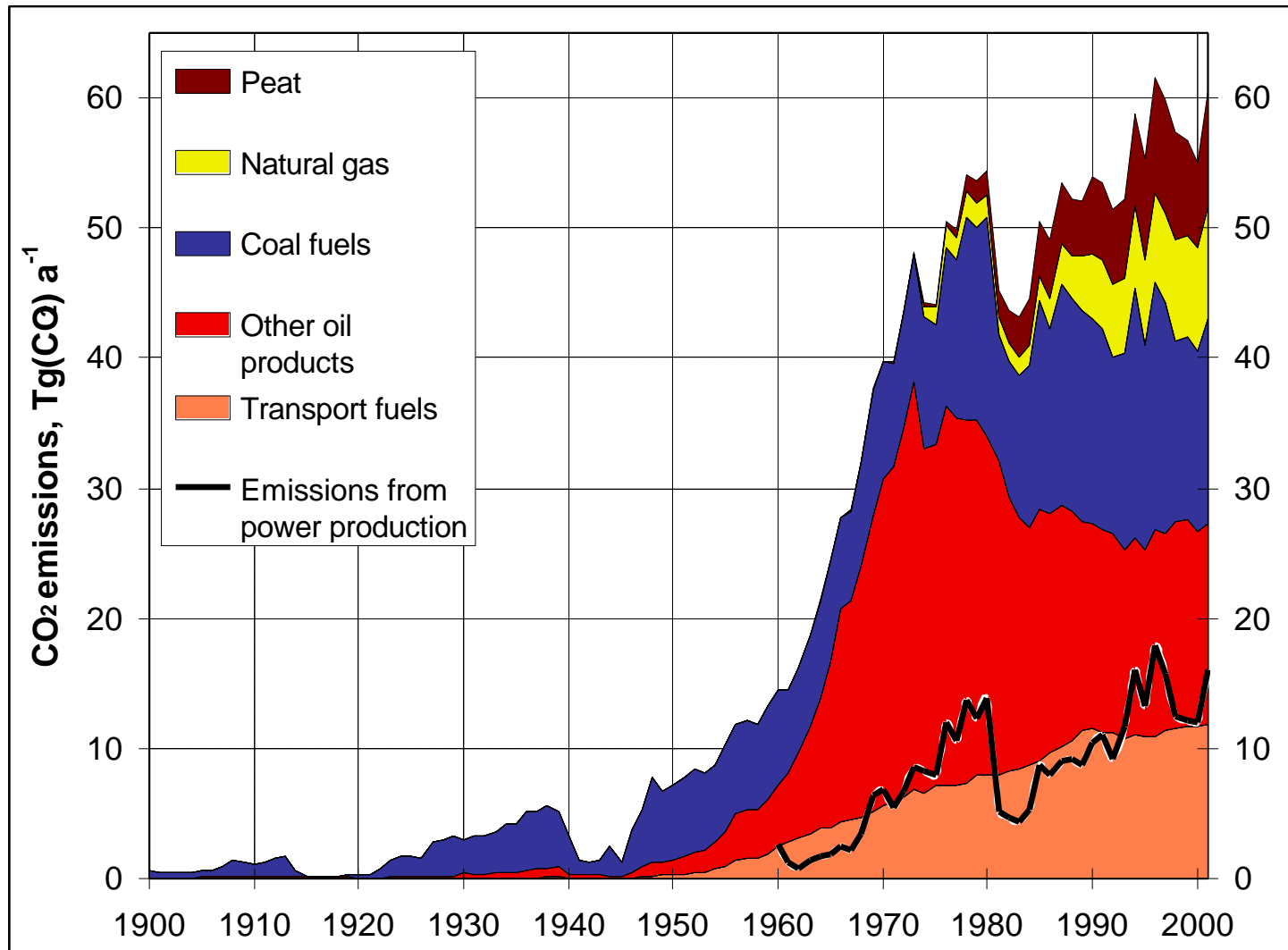
Disturbance of the planetary energy balance

Global average radiative forcing in early 1990's (IPCC 2001)



Level of Scientific Understanding



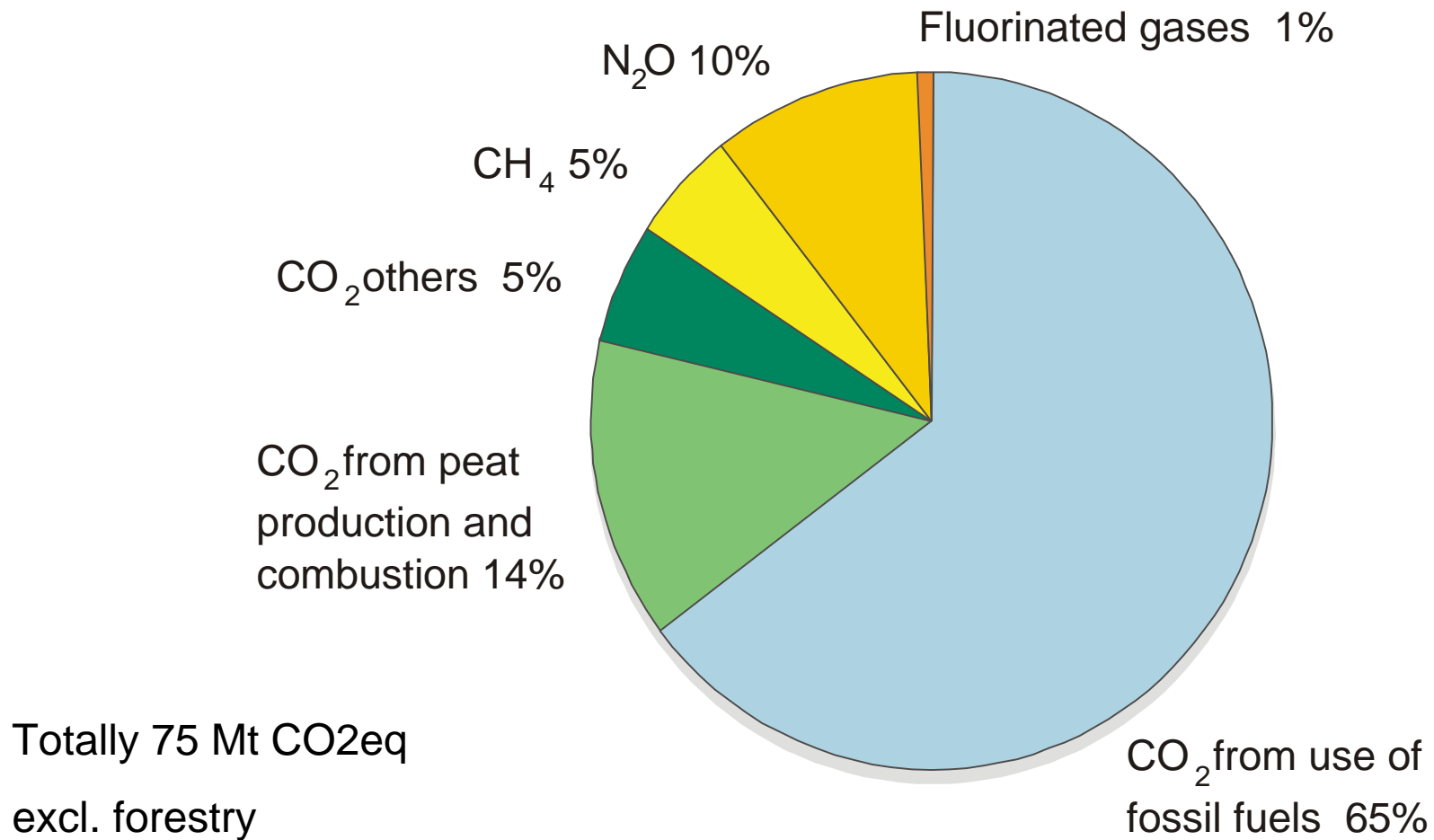
Fuel-based CO₂ emissions of Finland

Research and international negotiations

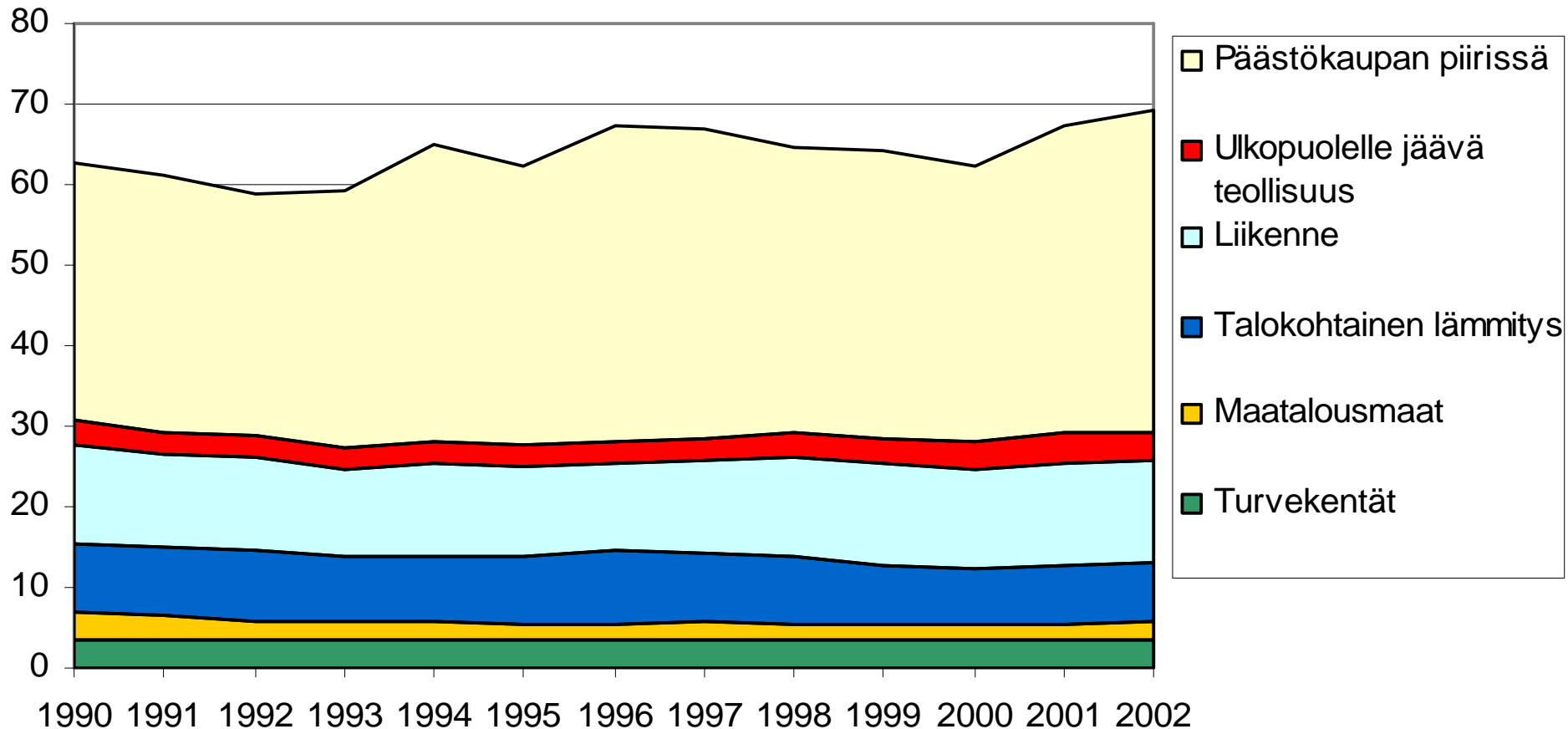
- ▼ Scientific work compiled and analysed by IPCC
 - Assessment reports (published in 1990, 1995 and 2001)
 - Special reports (e.g. Emissions Scens., LUCF)
 - Guidelines for National Greenhouse Gas Inventories
Rev. 1996, GPG 2000, LULUCF 2003
 - New work, e.g.:
 - Fourth Assessment Report 2007
 - Revised Inventory Guidelines 2006

- ▼ UN Framework Convention on Climate Change (UNFCCC), 1992
- ▼ Kyoto Protocol to UNFCCC, 1997

Greenhouse gas emission by gases in Finland in 2000

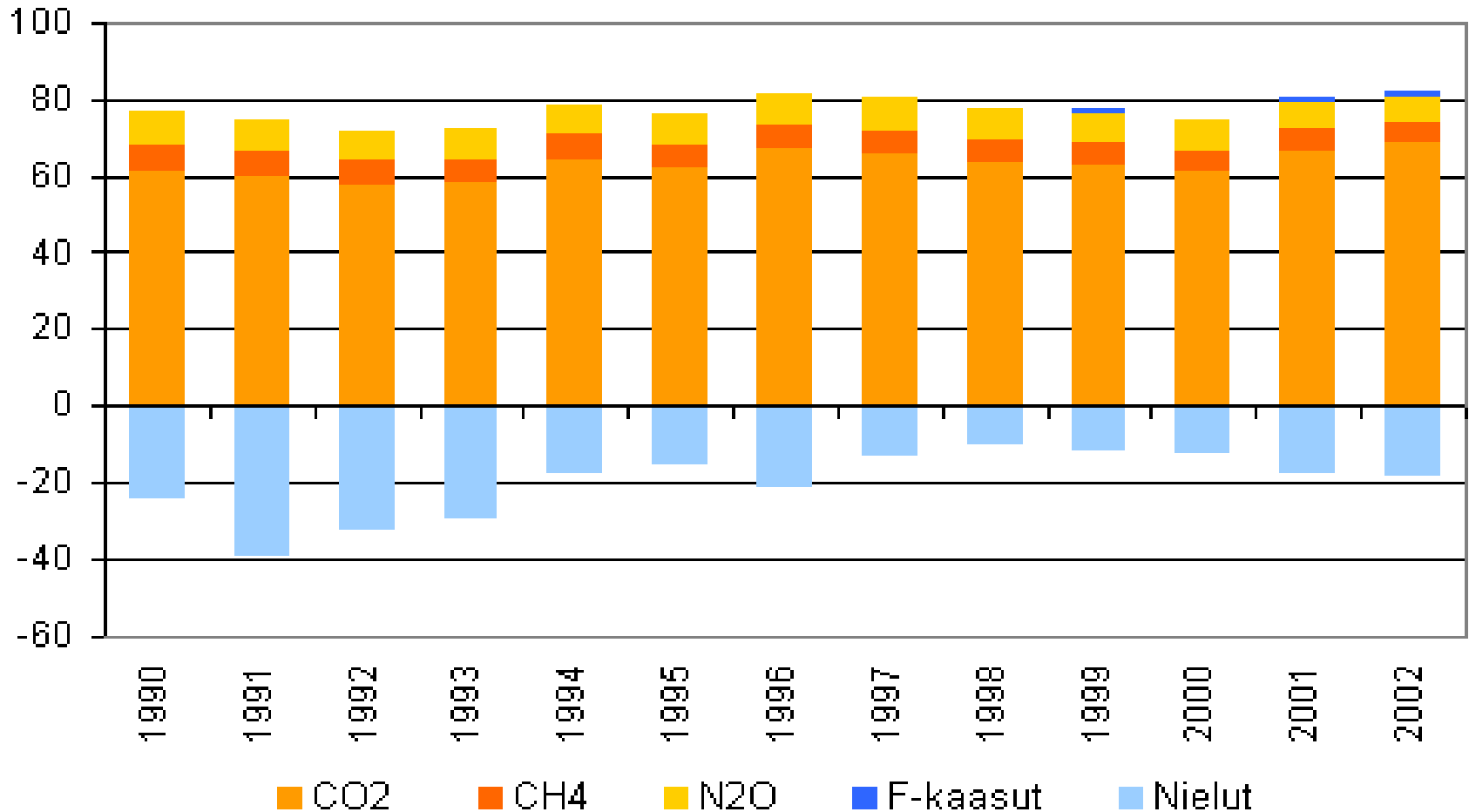


CO2 Emissions within/outside Emissions Trading, Mt CO₂



Lähde: Tilastokeskus

Greenhouse gas emissions and sinks in Finland (Mt CO₂eq).



Source: Statistics Finland, Min. of Environment

Summary

Forests

- considerable storage of carbon
- source of renewable raw material and energy
- can be used to lower the CO₂ concentration in the atmosphere
by increasing the carbon storage and
by replacing fossil fuels and energy-intensive materials

Carbon inventories are important means needed
in the mitigation of climate change